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April 11, 2005

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FAX NO.	(703) 872-9306

FROM: Michael Muczynski		**EXTENSION:**	805
PAGES (INCLUDING THIS PAGE):	5	**CLIENT NO:**	30506
		MATTER NO:	39552
PLEASE CONFIRM RECEIPT:	No	**COUNTRY CODE:**	US

MESSAGE:

Serial No. 10/657,760
Confirmation: 7777
Applicants: Pace et al.
Filed: September 8, 2003
Title: METHOD AND APPARATUS FOR QUANTITATIVE ANALYSIS
Art Unit: 2858
Examiner: Rebecca Michelle Vestal
Atty Docket: 30506/39552
Customer No. 04743

Enclosed is a copy of a Response to Restriction Requirement (4 pages).

Please contact Jen at (312) 474-6805 if you do not receive all of the pages in good condition.

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(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.	: 10/657,760	I hereby certify that this paper and all documents referred to herein as being enclosed are being transmitted to the United States Patent and Trademark Office, via facsimile on April 11, 2005 at facsimile number (703) 872-9306.
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Michael Muczynski

RESPONSE TO RESTRICTION REQUIREMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This paper is in response to the official action (restriction requirement) dated March 10, 2005.

In the official action, restriction was required between the claims of Group I (claims 1-17, directed to a sensory apparatus), and Group II (claims 18-23, directed to a method of generating a disinfection index of water).

The official action alleges that the claims of groups I and II are directed to patentably distinct species.

The requirement is traversed. Reconsideration is respectfully requested.

I. THE ADMISSIONS CONCERNING PATENTABILITY RESULTING FROM THE PATENT OFFICE'S POSITION

An effect of the position in the official action is that the Patent Office admits that the Group I claims are patentable over a disclosure of the Group II methods, and that the Group II claims are patentable over a disclosure of the Group I apparatus. M.P.E.P. 802.01 (section entitled "DISTINCT" states that **the distinctness required for restriction means that the subjects as disclosed "... ARE PATENTABLE (novel and unobvious) OVER EACH**

OTHER" (emphasis with capital letters in original). (See also M.P.E.P. 808.02, which states that where "related inventions are not patentably distinct as claimed, restriction ... is never proper.") The Patent Office has also stated that "it is imperative the requirement should never be made where related inventions as claimed are not distinct." M.P.E.P. 806.)

Thus, the effect of this restriction requirement, unless withdrawn, is that the Patent Office admits that the claimed Group I sensory apparatus are patentable over any disclosure of a method for generating a disinfection index of water according to the Group II claims. *See, e.g.*, M.P.E.P. 802.01. Likewise, the effect of this restriction requirement, unless withdrawn, is that the Patent Office admits that the claimed Group II methods for generating a disinfection index of water are patentable over any disclosure of a sensory apparatus according to the Group I claims. *Id.*

These positions are necessary to entry of the restriction requirement by the Patent Office and may be relied upon by the applicants during examination of this and continuing applications, unless the restriction requirement is withdrawn. If the examiner is not taking these positions, then it is submitted that the restriction requirement should be withdrawn upon reconsideration.

II. SEARCH AND EXAMINATION OF THE ENTIRE APPLICATION CAN BE MADE WITHOUT SERIOUS BURDEN

Even if the inventions are independent or distinct, search and examination of the entire application must be a serious burden on the examiner. M.P.E.P. 803 states:

> "If the search and examination of an entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to distinct or independent inventions."

The applicants respectfully submit that a complete search directed to the subject matter of the claims of Group I would require a search directed to the subject matter of the claims of Group II, and *vice versa*. Since search and examination of the entire application can be made without serious burden on the examiner, it would be wasteful of the time, effort, and resources of both the applicants and the Patent Office to prosecute these claims in separate applications. Search and examination of the two groups of claims together would be much more efficient than requiring the Patent Office and the applicants to do so separately in multiple applications.

III. RESTRICTION IS NOT PROPER BECAUSE THE INVENTIONS ARE NOT DISTINCT

The rejection is further traversed because the inventions are not distinct.

The official action cites MPEP 806.05(h), which recites the requirements for distinctness between a product and a process of using. The official action alleges that the inventions are distinct because "the method of generating a disinfection index of water can be practiced with another materially different product, such as an optical sensor or by titration."

It is respectfully submitted that the claimed process cannot be practiced with another materially different product. Accordingly, the inventions are not distinct, and the restriction requirement can be withdrawn.

The invention of Group II claims a method of generating a disinfection index. As described on page 3, one measure of disinfection index is the total concentration of free chlorine, and a more refined measure is the total concentration of free chlorine and combined chlorine species available for disinfection. Furthermore, there is a time component associated with the various equilibrium reactions representative of water chemistry, and the chemical constituents cross-react to affect the overall mass balance of the chemical constituents. The actual hypochlorous acid content is further mediated by water hardness and carbon dioxide. *See* pages 3-4 of the application.

Hence, to accurately determine free chlorine content, all four chemical parameters (free chlorine, pH, water hardness, and dissolved carbon dioxide (including ionic forms)) are measured at the same time (*i.e.*, concurrently). *See* page 4, lines 25-28. A single substrate comprising a plurality of sensors is recited in the Group I claims for achieving the necessary concurrent measurements on a sample, and a materially different product would not be sufficient to practice the method. A titration product, cited by the official action as a materially different product for practicing the method, would not be sufficient. The official action also cites an optical sensor as a materially different product. If the optical sensor includes only a single sensor, then it would not be sufficient. If the optical sensor includes a plurality of sensors on a substrate, then it would not be materially different from the invention of the Group I claims (*see, e.g.*, claim 1).

As described above, it is submitted that the claimed process cannot be practiced with another materially different product and, therefore, that the inventions are not distinct. The restriction requirement can be withdrawn.

IV. PROVISIONAL ELECTION

To satisfy 37 C.F.R. 1.143, the applicants hereby provisionally elect for examination on the merits, with traverse, the claims of Group I, *i.e.*, claims 1-17. In doing so, the applicants do not intend to abandon the scope of the non-elected claims as originally filed, but may pursue the non-elected claims in a divisional application if the restriction requirement is not withdrawn upon reconsideration.

Respectfully submitted,

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April 11, 2005

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